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EXAMINER	
WANG, JIN CHENG	
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2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,000	MANABE, SHIZUO	
	Examiner	Art Unit	
	JIN-CHENG WANG	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/2009 has been entered. The claims 1 and 4-10 have been amended. Claims 2-3 have been canceled. Claims 1 and 4-10 are pending in the present application.

Response to Arguments

Applicant's arguments filed 10/27/2009 have been fully considered but are not found persuasive in view of the new ground(s) of rejection set forth in the this Office Action.

As addressed below, the Claim 1 is rejected to be unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524) and Ozawa US Patent Application Publication 2004/0001628 (hereinafter Ozawa).

As addressed below, Kobari discloses at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline

direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8.

Kobarai teaches a computer program product for optimizing character string placing, the computer program product stored on a computer readable medium and adapted to perform operations (Drawing #2) comprising:

Drawing prospective guide lines as virtual horizontal lines at regular intervals in a demarcated region (*e.g., at Drawing #3, at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line are*

drawn in the figure, meeting the claimed prospective guide line(s), and at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string);

Selecting, from among the prospective guide lines, specific prospective guide lines that are longer than a longest horizontal segment of an area of a character string (*e.g., Kobari discloses at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly disclosed in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. Korari discloses placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon,*

specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction. Thus, Kobari discloses a centerline is specified to place the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8);

Specifying one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines in a vertical direction (*e.g., Kobari discloses at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly disclosed in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. Korari discloses placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed*

quadrangle to place the character string along the horizontal lengthwise direction. Thus, Kobari discloses a centerline is specified to place the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8);

Placing the character string along said one of the specific prospective guide lines (*e.g., Kobari discloses at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly disclosed in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. Korari discloses placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction. Thus, Kobari discloses a centerline is specified to*

place the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8).

Kobari discloses performing a horizontal placement to place a character string along a prospective guide line that is located at the center of prospective guide lines that are longer than the longest horizontal segment of the area of the character string (*e.g., at Drawing #3, at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line are drawn in the figure, meeting the claimed prospective guide line(s), and at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string*), the prospective guide lines being drawn as virtual horizontal lines at regular intervals in the demarcated region (*e.g., At Drawing #3, at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line are drawn, meeting the claimed prospective guide line(s), and at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold wherein the lines are drawn as virtual horizontal lines in the Drawing #6 as regular scan lines on a display at regular time intervals in the demarcated region 4*).

Kobari discloses at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly disclosed in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal lines and the centerline of each quadrangle is illustrated in Fig. 3. Korari discloses placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction. Thus, Kobari discloses a centerline is specified to place the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8.

Kobari teaches at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line,

meeting the claimed prospective guide line(s). Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, meeting the claim limitation of longer than the longest horizontal segment of the area of the character string. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon that are longer by a threshold value than the longest horizontal segment of the area of the character string.

With respect to the claim 6, Kobari teaches a computer program product for optimizing character string placing, the computer program product stored on a computer readable medium and adapted to perform operations (Drawing#2) comprising:

Performing a first horizontal placement or a first tilting placement (*Kobari teaches at Drawing#5 a horizontal placement. Kobari teaches at Drawing#4 and Drawing#6 a tilting placement or inclination placement*) on all demarcated regions (*Kobari teaches at Drawing#6 a demarcated region and at Drawing#4 and Drawing#6 placing character strings on other demarcated regions, See Paragraph 0008-0028*);

Performing a pull-out placement (*Kobari teaches at Drawing#7 a pull-out placement of the character string in which the character string is placed within/outside of the polygon. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in*

the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard) on each demarcated region in which the first horizontal placement or the first tilting placement cannot be performed (*Kobari teaches at Drawing#6 a pull-out placement in which the first horizontal placement cannot be performed. Kobari teaches at Drawing#7 a pull-out placement of the character string on a demarcated region in which the tilting placement cannot be performed. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4*), assuming that the character string placed in the first horizontal placement or the first tilting placement has not been placed (*Kobari teaches at Drawing#6 that the first horizontal placement has not been placed. Kobari teaches at Drawing#7 a pull-out placement of the character string in which the character string is placed outside of the polygon 4 and the first tilting placement has not been placed. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4*);

Performing a second horizontal placement or a second tilting placement to place the character string placed in the first horizontal placement or the first tilting placement, and, when the placement cannot be performed because of the character string placed through the pull-out placement hindering the placement (*Kobari teaches at Drawing#6 a pull-out placement of the*

character string on the demarcated polygon region and at Drawing#7 a pull-out placement of the character string in the demarcated polygon region. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches re-arranging the character string either in a horizontal direction or in a inclination direction in a position included by the polygon wherein re-arrangement inherently involves a second horizontal placement or a second inclination placement to place the character string so as to include the character string in the polygon without pulling-out placement of the character string. Kobari teaches at Drawing#8 & Drawing#9 the results of the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string), thereby placing the character string through the second horizontal placement or the second tilting placement (*Kobari teaches at Drawing#8 & Drawing#9 the results of the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a*

character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard).

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Kobari thus teaches that an adjusting/re-arranging placement to move the character string vertically or horizontally within the polygon when the character string cannot be placed through the first horizontal placement or the first tilting placement.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 and 4-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 and 4-10:

These claims, e.g., the claim 1 and claim 6, *inter alia*, recite "[a] computer program product for optimizing character string placing, the computer program product stored on a computer readable medium and adapted to perform operations comprising". Since the method of originally filed claim 1 is non-statutory, the claim computer program product stored on a computer readable medium is also non-statutory as the additional claim limitation of computer storage medium failed to provide a physical transformation or a *specific* machine in the method steps.

These claims do not claim a physical transformation or a *specific* machine in the method steps claimed to be performed by these claims. In re Bilski, 88 USPQ2d 1385 (Fed. Cir. 2008). In re Abele and Marshall, 214 USPQ 682 (C.C.P.A. 1982). US Patent and Trademark Office Appeal No. 2008-1495, Ex parte Lars Langemyr et al., decided May 28, 2008. Additionally the storage medium limitation does not make the non-statutory method statutory in view of US Patent and Trademark Office Appeal No. 2008-1495, Ex parte Lars Langemyr et al., decided May 28, 2008. US Patent and Trademark Office Appeal No. 2008-4742, Ex parte MARIUS A.

CORNEA-HASEGAN, decided January 13, 2009, , wherein the claim 18 recites "computer readable media including program instructions which when executed by a processor cause the processor to perform…". It is further stated, "Appellant's claim recites a method performed by a processor. The recitation of a processor performing various functions fails to impose any meaningful limits on the claim's scope. The recitation of a processor performing various functions is nothing more than a general purpose computer that has been programmed in an unspecified manner to implement the functional steps recited in the claims. The recitation of a processor in combination with purely functional recitations of method steps, where the functions are implemented using an unspecified algorithm, is insufficient to transform otherwise unpatentable method steps into a patent eligible process. Holding otherwise would exalt form over substance and would allow pre-emption of the fundamental principle present in the non-machine implemented method by the addition of the mere recitation of a processor. Such a file-of-use limitation is insufficient to render an otherwise ineligible process claim patent eligible. See Bilski, at 957 (citing Diehr, 450 U.S. at 191-92 (noting that eligibility under 101 cannot be circumvented by attempting to limit the use of the formula to a particular technological environment…)."

Limiting the claim to computer readable storage medium does not add any practical limitation to the scope of the claim. Such a field-of-use limitation is insufficient to render an otherwise ineligible claim patent eligible. In essence applicant is preempting all substantial uses of the claimed abstract idea. The claims 4-10 are subject to the same rationale of rejection set forth in the claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524) and Ozawa US Patent Application Publication 2004/0001628 (hereinafter Ozawa).

In re claim 1, Kobarai teaches a computer program product for optimizing character string placing, the computer program product stored on a computer readable medium and adapted to perform operations (Drawing #2) comprising:

Performing a horizontal placement to place a character string along a prospective guide line that is located at the center of prospective guide lines that are longer than the longest horizontal segment of the area of the character string (*e.g., at Drawing #3, at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line are drawn in the figure, meeting the claimed prospective guide line(s), and at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus*

meeting the claimed "longer than the longest horizontal segment of the area of the character string), the prospective guide lines being drawn as virtual horizontal lines at regular intervals in the demarcated region (*e.g., At Drawing #3, at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line are drawn, meeting the claimed prospective guide line(s), and at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold wherein the lines are drawn as virtual horizontal lines in the Drawing #6 as regular scan lines on a display at regular time intervals in the demarcated region 4*).

Kobari discloses at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of each quadrangle or the horizontal lines are drawn in the figure, meeting the claimed prospective guide line(s). Kobari discloses at Drawing# 5 and Paragraph 0017, the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction---the centerline direction---- of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, thus meeting the claimed "longer than the longest horizontal segment of the area of the character string. The centerline of the circumscribed quadrangle 6 has been also explicitly drawn and visualized in Drawing #3 and multiple circumscribed quadrangles including the rectangle 6 are disclosed in Drawing #5 wherein each quadrangle includes at least two circumscribed horizontal

lines and the centerline of each quadrangle is illustrated in Fig. 3. Korari discloses in Written Description placing a character string along the centerline in the horizontal lengthwise direction of a circumscribed quadrangle within a polygon having a plurality of circumscribed quadrangles and thus discloses selecting from among the prospective guide lines of the circumscribed quadrangles within a polygon, specific prospective guide lines of a particular circumscribed quadrangle by selecting the particular circumscribed quadrangle to place the character string along the horizontal lengthwise direction of the particular circumscribed quadrangle. Thus, Kobari discloses a centerline is specified within a selected circumscribed quadrangle to place or align the character string in the horizontal lengthwise direction as clearly shown in Drawing #5 and Drawing #8.

Kobari teaches at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line, meeting the claimed prospective guide line(s). Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold, meeting the claim limitation of longer than the longest horizontal segment of the area of the character string. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon that are longer by a threshold value than the longest horizontal segment of the area of the character string.

Kobari et al. discloses selecting the longest of the lines ([0015]-[0018]). Although Kobari implicitly teaches prospective guide lines by disclosing *at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5,* Kobari does not expressly disclose the prospective guide lines. However, Fushiki et al. discloses producing scan lines to determine string placement (Fig. 4a). It would have been obvious to one of ordinary skill to use the scan lines of Fushiki et al. of which the length determiner of Kobari et al. with the motivation of finding the best place to a label.

In re claim 4, Kobari at least implicitly teaches or suggests the claim limitation of adjusting placement to move the placed character string vertically or horizontally within the demarcated region [Paragraph 0026].

Kobari teaches at Drawing #3 at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5 along with a centerline of the quadrangles or the horizontal line which meets the claimed a prospective guide line. Kobari teaches at Paragraph 0017 that the actual breadth of the character string circumscribed quadrangle 6 in the middle point of the lengthwise direction of the circumscribed quadrangle 5 of a polygon should have more than a character string width + threshold. Thus, Kobari teaches performing a horizontal placement of character string at Drawing#3 and Drawing#8 along a prospective centerline that is located at the center of the prospective guide lines of the quadrangles 6 and quadrangles 5 within the polygon

that are longer by a threshold value than the longest horizontal segment of the area of the character string.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches adjusting or re-arranging the character string to move the placed character string vertically or horizontally within the polygon----the demarcated region.

Kobari et al. discloses selecting the longest of the lines ([0015]-[0018]). Although Kobari implicitly teaches prospective guide lines by disclosing *at least two horizontal prospective guide lines for each circumscribed quadrangle 6 and at least two horizontal prospective guide lines for each circumscribed quadrangle 5,* Kobari does not expressly disclose the prospective guide lines. However, Fushiki et al. discloses producing scan lines to determine string placement (Fig. 4a). It would have been obvious to one of ordinary skill to use the scan lines of Fushiki et al. of which the length determiner of Kobari et al. with the motivation of finding the best place to a

label. Moreover, it also needs to be shown whether Kobari and Fushiki disclose specifying the one of the specific prospective guide lines that is located at the center of an arrangement of the specific guide lines in a vertical direction. However, Ozawa discloses a computer program of placing character string aligned with horizontal lines including the centerline and specifying a centerline so as to place the character string along the centerline (Ozawa Figs. 22A-22B as disclosing specifying the centerlines of the bounding boxes and Fig. 26A-26B as disclosing placing a character string in a bounding box). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have incorporated Ozawa's specifying a centerline of a bounding box and placing a character string along the centerline within the bounding box wherein each bounding box further comprises at least two horizontal guide lines. One of the ordinary skill in the art would have been motivated to place the character string in the center of the bounding box (Ozawa Figs. 26A-26B and Kobari Drawing #3 and Drawing #8).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524) Ozawa US Patent Application Publication 2004/0001628 (hereinafter Ozawa), and Freeman et al. (US Pat. No. 5,724,072).

In re claim 5, Kobari at least implicitly teaches at Drainge#6, Draing#8 and Drawing#9 the claim limitation of centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string such that the character string is placed in the center of the polygon. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches adjusting or re-arranging the character string to move the placed character string vertically or horizontally within the polygon----the demarcated region.

Kobari et al. and Fushiki et al. do not expressly disclose placing the label in the center. However Freeman et al. discloses placing the label into the geographic center (Column 8 lines 21-40). It would have been obvious to one of ordinary skill to not only choose the middle of the scan lines from Kobari et al. and Fushiki et al but also to center it on the lines from Freeman with the motivation of having better placement for label for maps such a soil survey maps.

Claims 6-7, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524) and Freeman et al. (US Pat. No. 5,724,072).

In re claims 6, 7,

Kobari teaches a computer program product for optimizing character string placing, the computer program product stored on a computer readable medium and adapted to perform operations (Drawing#2) comprising:

Performing a first horizontal placement or a first tilting placement (*Kobari teaches at Drawing#5 a horizontal placement. Kobari teaches at Drawing#4 and Drawing#6 a tilting placement or inclination placement*) on all demarcated regions (*Kobari teaches at Drawing#6 a demarcated region and at Drawing#4 and Drawing#6 placing character strings on other demarcated regions, See Paragraph 0008-0028*);

Performing a pull-out placement (*Kobari teaches at Drawing#7 a pull-out placement of the character string in which the character string is placed within/outside of the polygon. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a*

standard) on each demarcated region in which the first horizontal placement or the first tilting placement cannot be performed (*Kobari teaches at Drawing#6 a pull-out placement in which the first horizontal placement cannot be performed. Kobari teaches at Drawing#7 a pull-out placement of the character string on a demarcated region in which the tilting placement cannot be performed. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4*), assuming that the character string placed in the first horizontal placement or the first tilting placement has not been placed (*Kobari teaches at Drawing#6 that the first horizontal placement has not been placed. Kobari teaches at Drawing#7 a pull-out placement of the character string in which the character string is placed outside of the polygon 4 and the first tilting placement has not been placed. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4*);

Performing a second horizontal placement or a second tilting placement to place the character string placed in the first horizontal placement or the first tilting placement, and, when the placement cannot be performed because of the character string placed through the pull-out placement hindering the placement (*Kobari teaches at Drawing#6 a pull-out placement of the character string on the demarcated polygon region and at Drawing#7 a pull-out placement of the character string in the demarcated polygon region. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an*

operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Therefore, Kobari teaches re-arranging the character string either in a horizontal direction or in a inclination direction in a position included by the polygon wherein re-arrangement inherently involves a second horizontal placement or a second inclination placement to place the character string so as to include the character string in the polygon without pulling-out placement of the character string. Kobari teaches at Drawing#8 & Drawing#9 the results of the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string), thereby placing the character string through the second horizontal placement or the second tilting placement (*Kobari teaches at Drawing#8 & Drawing#9 the results of the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, it is stated, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, move a character string on vertical 2 bisectrices and rearrange in the position included by the polygon 4. When not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing*

a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard).

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Kobari thus teaches that an adjusting/re-arranging placement to move the character string vertically or horizontally within the polygon when the character string cannot be placed through the first horizontal placement or the first tilting placement.

Kobari et al. and Fushiki et al. disclose the inclination of the line if it does not fit ([0015] - [0026]). Although Kobari implicitly teach the pull-out placement in the Drawing#7 as an intermediate step subject to re-arrangement of the character strings, Kobari et al. and Fushiki et al. do not expressly disclose pull out placement in a clear manner. However, Freeman et al. discloses the pull out placement (Column 5, lines 53- 65). It would have been obvious to combine the inclining and placement of the line and case method of inclining if the line doesn't

fit of Kobari et al. and Fushiki et al. and add the case where the string can't fit inside and use the pop out method of Freeman et al. with the motivation of getting the better way to place the string.

In re claim 10,

Kobari at least implicitly teaches at Draings#6, Draing#8 and Drawing#9 the claim limitation of centering placement to arrange the placed character string in such a manner that the distances between the demarcated region segments that demarcate the demarcated region and dots on character string region segments that demarcate the character string region are made uniform.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string such that the character string is placed in the center of the polygon. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard.

Kobari et al. and Fushiki et al. disclose the inclination of the line if it does not fit ([0015] - [0026]). It is noted that Kobari et al. and Fushiki et al. do not expressly disclose pull out placement placing the label into the geographic center (Column 8 lines 21-40). However, Freeman et al. discloses the pop out placement (Column 5, lines 53-65) placing the label into the geographic center (Column 8 lines 21-40). It would have been obvious to combine the inclining and placement of the line and case method of inclining if the line doesn't fit of Kobari et al. and Fushiki et al. and add the case where the string can't fit inside and use the pop out method of Freeman et al. with the motivation of getting the better way to place the string.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobari et al. (Japanese Publication No. 8-167039) in further view of Fushiki et al. (US Pat. No. 6,868,524), Freeman et al. (US Pat. No. 5,724,072), and Yoshimura et al. (Japanese Publication No. 9-185696).

In re claims 8-9,

Kobari at least implicitly teaches at Draings#6, Drawing 7, Drawing#8 and Drawing#9 the claim limitation of a replacing placement, after the second horizontal placement or the second tilting placement in a re-arrangement of the character string, to place alternative display objects such as characters, other character strings, symbols, or graphics, instead of the character string that cannot be placed in the first horizontal placement or the first tilting placement, the pull-output placement, or second horizontal placement or the second tilting placement.

Kobari further teaches at Drawing#7 the pull-out placement again prior to the replacing placement in Drawing#9.

Kobari teaches at Drawing#8 & Drawing#9 the second horizontal placement or a second tilting placement in terms of re-arrangement to place the character string such that the character string is placed in the center of the polygon. At Paragraph 0026-0029, Kobari teaches that, when the circumscribed quadrangle 6 of a character string is not included by the polygon 4, meaning that the pull-output placement in Drawing#8, a character string is moved on vertical 2 bisectrices and rearranged in the position included by the polygon 4. Kobari further teaches that, when the character string is not re-arrangeable, it looks for directions of an operator and it rearranges in a direction position (7d). Although only inclusion relation was used for the inspection of the justification of a locating position, it is possible to also perform the check of whether other elements overlap with the existence region of a character string. It becomes possible by dividing a polygon into plurality and considering it to also perform arrangement of two or more character strings to one polygon based on inclination used as a standard. Thus, Kobari teaches placing other character strings.

It is noted that Fushiki et al and Fushiki et al. and Freeman et al. do not expressly disclose replacement placement. However, Yoshimura et al. discloses replacement placement [0118]. It would have been obvious to combine the if statement and string placement of Fushiki et al. and Freeman et al. with the added if statement for replacement placement of Yoshimura et al. with the motivation of automatically shortening the string.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JIN-CHENG WANG whose telephone number is (571)272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jin-Cheng Wang/
Primary Examiner, Art Unit 2628